

Arizona Department of Water Resources  
**GROUNDWATER USERS ADVISORY COUNCIL**  
Tucson Active Management Area  
Kenneth Seasholes, Area Director



DEE T. O'NEILL  
Chair

DAVID MODEER  
Vice-Chair

JOHN MAWHINNEY

JON POST

CHUCK SWEET

**Minutes**  
**September 16, 2005**

**Members Present:**

Dee O'Neill, Chair  
David Modeer, Vice-Chair  
John Mawhinney  
Chuck Sweet

**Tucson Staff Present:**

Kenneth Seasholes, Area Director  
Mary Bauer  
Christina Bickelmann  
Laura Grignano  
Diane Kusel  
Jeff Tannler  
Virginia Welford  
Dawne Wilson

**Others:**

Tracey Berry, Tucson Water  
Janet Lea Carr, SAWUA  
Kathleen Chavez, Pima County  
Glenn France, U of A  
Arturo Gabaldon, Community Water Company  
Eve Halper, Bureau of Reclamation  
Val Little, Water CASA  
Ralph Marra, Tucson Water  
CH Matthewson, PAG  
Mark Myers, Consultant – Marana  
David Quanrud, U of A  
Dennis Rule, Tucson Water  
Phillip Saletta, Oro Valley Water Utility  
Pete Schlegel, PMA Group  
Sydney Smith, CMID  
Warren Tenney, Metro Water District

**1. Call to Order**

Chairperson, Dee O'Neill called the meeting to order at 9:05 a.m. Introductions were made.

**2. Approval of Minutes**

John Mawhinney made a motion to approve the minutes of June 29, 2005. Chuck Sweet seconded the motion. The minutes were unanimously approved.

### **3. Southern Arizona Water Users Association: Activities and Plans**

Dennis Rule of Tucson Water was invited to provide an update on the Southern Arizona Water Users Association (SAWUA) activities and plans. SAWUA is a nonprofit organization consisting of 15 members, including governmental bodies, municipal water providers, and agricultural water users. The group was formed in 1999 to discuss, analyze and recommend ways to preserve and enhance the quality and quantity of Southern Arizona's water resources.

SAWUA has been evaluating potential concepts for creating a cooperative organization, distinct from SAWUA, to assist in water resources management in the Tucson region. It has looked at different water authorities as possible models, and the Southern Nevada Water Authority concept seems to be the best fit for the Tucson area.

After many months of discussion, on August 16, 2005 the SAWUA board unanimously approved a concept that will be moving forward to governing bodies and other interest groups to consider. It recommends pursuing SAWUA's concept in terms of legal, financial and institutional feasibilities. Within the next few months, SAWUA will present how it envisions this program working.

Mr. Rule stressed SAWUA is not talking about forming a water authority or a regulatory agency that would dictate water resources policies to water users. None of the water providers would give up their service area nor would there be any redistribution of exiting water resources. It is essentially looking at a cooperative representation of the municipal water interests in this region for facilitating the management and beneficial use of existing water resources. In addition, it would pursue additional water resources and distribute them on the basis of need. The governance structure would be set up whereby critical decisions by the organization would be made on a consensus basis.

Once the organization builds a foundation to an acceptable level within the community, it could potentially take on a larger role in future years, such as facilitating on-the-ground projects.

The GUAC members expressed their belief that SAWUA's concept would create a regional voice and members were supportive of the group's effort.

### **4. Multiple Device "Smart" Irrigation Controller Study**

David Quanrud of the University of Arizona was invited to provide an update on the "Smart" Irrigation Controller Study. This study is supported in part by the Arizona Department of Water Resource's (ADWR) conservation assistance funds. Tracey Berry of Tucson Water and Christina Bickelmann of ADWR were recognized as contributors to the design and success of the project.

The "Smart" devices utilize real time local weather data to control and schedule the frequency and duration of irrigation that is applied to landscapes. The three devices that were used in this study operate on three different mechanisms: 1) an ET-based sensor, 2) a humidity sensor, and 3) a soil moisture sensor.

The objective of this study is to evaluate the efficiency of several types of “Smart” irrigation devices for residential use in Tucson. The study is for two years and data are being collected from 27 residential participants.

Three groups of nine participants are using one of the three devices: 1) WeatherTRAK® (ET- based), 2) WeatherMiser® (humidity sensor), and 3) Rainbird® (soil moisture sensor). A fourth group has been established as the “control” group consisting of 63 participants. Water use from the 63 participants’ existing irrigation systems will be monitored to serve as a reference to so the study data can be adjusted for climatic variability.

There is also a subset of participants that have separate irrigation meters. They are primarily larger water users on the reclaimed water system. Only their outdoor water use is being monitored; whereas, the other group’s total water use is being monitored.

In order to meet the criteria for the study, participants must be homeowners who have not made any changes to their irrigation system within two years prior to the study, and they agree not to make any changes to the system during the study. Audits of the irrigation systems were conducted and approved by the Tucson Water Zanjeros.

The devices were installed in July 2004 with monitoring beginning at all 27 sites in August 2004. The efficiency of the devices are being evaluated during the study and then will be compared to water use prior to the study.

Preliminary results, based on the first year of the study show the ET-based, humidity sensor, and soil moisture sensor devices resulted in a 29%, 17%, and 5% decrease in average water use, respectively, compared to the prior two years.

Future work will include the continued collection of data through August 2006, with the final report to include an analysis of potential water savings at selected sites and the efficiency of each device to realize that savings. Participants will be given an exit survey to gauge user satisfaction and device effectiveness.

## **5. “Drop Your Water Use” Plant Tagging Program**

Christina Bickelmann gave an update on the “Drop Your Water Use” Program. The purpose of the program is to educate retail nursery customers on how to plan and maintain a healthy and water efficient landscape.

The program is a voluntary collaboration between ADWR and local nurseries that uses a simple water drop system to identify plants with similar water requirements. Plants are labeled one through three, distinguished with corresponding water drops and numbers. All the plants are currently on the Tucson AMA official low water use plant list. By choosing plants with the same number a gardener can more successfully group plants by water needs.

Over the last year, the program has been well received. To date there are 15 participating retail nurseries, along with the local Home Depots, and four wholesale nurseries. Marketing materials have been designed and distributed to the nurseries in order to promote the program. A display wall has also been created and showcased at horticultural trade shows and conferences, as well as the Governor's water listening session held in Tucson.

The next step is to follow-up with participants to get their feedback on ways to improve and make the program more visible. There will also be an effort to encourage additional wholesale nursery participation.

Dee O'Neill asked if David Modeer could promote the program through television spots through Tucson Water's airtime. He indicated that this could be possible. Tucson Water has advertised the program through its newsletter and continues to do so through its outreach events.

GUAC members expressed support for continuation of this program.

## **5. Withdrawal Fee**

Kenneth Seasholes reported that the groundwater withdrawal fee must be set for 2006. The maximum statutory cap is \$3.00 per acre-foot. \$2.50 goes to the Arizona Water Banking Authority (AWBA) for storage. The remaining \$.50 is currently committed to Christina's position non-regulatory conservation efforts, including "Drop Your Water Use", the annual Xeriscape contest and other education/outreach programs. The funds also support the ongoing subsidence and aquifer storage monitoring agreement with the USGS; Water CASA's ECoBA program; and the "Smart" Irrigation Controller Study. In addition, there is ongoing ADWR monitoring of well sweep data, and in 2006 a new hydrographic map series report will be made available for the Tucson AMA.

Mr. Seasholes noted the amount of revenue ADWR is collecting continues to decline as more renewable resources are being utilized.

David Modeer made a motion to set the withdrawal fee for calendar year 2006 at \$3.00 per acre-foot, with \$2.50 being allocated to the AWBA and \$.50 per acre-foot to the Tucson AMA Water Management Assistance Program. John Mawhinney seconded the motion. The motion was unanimously approved.

## **6. Area Director's Report**

Kenneth Seasholes reported that each year Tim Henley, Manager of the Arizona Water Banking Authority comes to Tucson to review the upcoming plan of operation for the AWBA. Mr. Seasholes reported that 40,000 acre-feet is projected for intrastate storage in Tucson. Interstate storage numbers will not be available until October when orders are due.

The plan of operation's draft proposal would show 20,000 acre-feet going to CAVSARP, which was recently permitted 80,000 acre-feet (up from 60,000). The remaining 20,000

acre-feet would be split among Pima Mine Road, Lower Santa Cruz, and Avra Valley state demonstration projects. These numbers are subject to change. Mr. Henley is asking for feedback on the proposed intrastate storage numbers.

Mr. Seasholes continued by reporting that the Assured Water Supply Rule Advisory Committee is on hiatus as the rule package is being developed for review, which should be available within the next few weeks.

The wells rules process is moving forward and is reaching an end. Most of the changes are modest. As part of this process, on September 20, 2005 at ADWR's Phoenix office there will be a presentation by the Salt River Project and Robert Glennon from the University of Arizona's College of Law, on surface water issues and the impact on riparian areas.

There will be a seven basin states meeting on the Colorado River shortage issues on September 21, 2005 in Albuquerque and a follow-up symposium in Santa Fe with the basin states and the Department of Interior.

There will also be an intrastate shortage sharing meeting on September 21, 2005 at 1:30 p.m. at AMWUA in Phoenix.

## **7. Public Comment**

Mr. Mawhinney commented that it would be valuable to have a comprehensive groundwater storage inventory update for Tucson. Mr. Seasholes responded this could be given at a future GUAC meeting.

Mr. Mawhinney continued by stating that he believes that agriculture's use of groundwater one of the major impediments to the Tucson AMA reaching its safe-yield goal. One of the reasons for this is the low-cost preference power that agriculture can use for pumping in this area, and Mr. Mawhinney is interested in incentives for use of renewable supplies instead.

Cortaro-Marana Irrigation District (CMID) has low-cost preference power it is not fully using. Mr. Mawhinney commented that perhaps CMID could take this excess preference power and apply it toward CAP's electrical cost for moving water. Both CMID and CAP seem amenable to this idea. One of the big issues will be with the Arizona Power Authority (APA). APA would need to determine if CMID could use the power in a manner other than its current use, which is to pump groundwater. If this could be done it would increase the Tucson area's use of CAP water and decrease groundwater pumping, thus helping safe-yield. Mr. Seasholes expressed support for the concept.

Mr. Mawhinney also asked for an update on the Institutional and Policy Advisory Group's analysis and recommendation regarding the recharge capital charge at state demonstration projects. Mr. Seasholes reported that a memo was sent to ADWR Director, Herb Guenther outlining the proposal, which recommends that the Central Arizona Water Conservation District (CAWCD) direct revenues from the recharge capital charge assessed on interstate storage at Tucson AMA state demonstration projects toward

additional storage in the AMA. Because the decision is at the full discretion of the CAWCD, the Board would need to request that CAP staff investigate the issue.

**8. Date and Agenda for Next Meeting**

The next meeting will be scheduled for some time in November. Potential agenda items include Colorado River and CAP issues.

**9. Adjournment**

The meeting was adjourned at 11:05 a.m.